Release notes for ENDF/B Development n-074_W_183 evaluation

April 26, 2017

- `fizcon` Warnings:

  1. Cross-correlations with threshold reactions, so covariance doesn't start at 10e-5 eV, FIZCON bug!
     MAT=7434, MF=33, MT= 2 (1): X Thresh. cov.

```
ERROR(S) FOUND IN MAT=7434, MF=33, MT=  2
   ENERGY INCORRECT                                SEQUENCE NUMBER     1
       EXPECT  1.00000E-05, FIND  5.00000E+03
   ENERGY INCORRECT                                SEQUENCE NUMBER     1
       EXPECT  1.00000E-05, FIND  5.00000E+03
... [16 more lines]
```

  2. Threshold reaction, so covariance doesn't start at 10e-5 eV, FIZCON bug!
     MAT=7434, MF=33, MT= 17 (1): Thresh. cov.

```
ERROR(S) FOUND IN MAT=7434, MF=33, MT= 17
   ENERGY INCORRECT                                SEQUENCE NUMBER     3
       EXPECT  1.00000E-05, FIND  2.20000E+03
   ENERGY INCORRECT                                SEQUENCE NUMBER     3
       EXPECT  1.00000E-05, FIND  3.57170E+06
```

  3. Threshold reaction, so covariance doesn't start at 10e-5 eV, FIZCON bug!
     MAT=7434, MF=33, MT= 51 (1): Thresh. cov.

```
ERROR(S) FOUND IN MAT=7434, MF=33, MT= 51
   ENERGY INCORRECT                                SEQUENCE NUMBER     7
       EXPECT  1.00000E-05, FIND  5.00000E+03
   ENERGY INCORRECT                                SEQUENCE NUMBER     7
       EXPECT  1.00000E-05, FIND  3.57170E+06
```

  4. Cross-correlations with threshold reactions, so covariance doesn't start at 10e-5 eV, FIZCON bug!
     MAT=7434, MF=33, MT=102 (1): X Thresh. cov.

```
ERROR(S) FOUND IN MAT=7434, MF=33, MT=102
   ENERGY INCORRECT                                SEQUENCE NUMBER     1
       EXPECT  1.00000E-05, FIND  5.00000E+03
   ENERGY INCORRECT                                SEQUENCE NUMBER     7
       EXPECT  1.00000E-05, FIND  3.57170E+06
... [10 more lines]
```

  5. Threshold reaction, so covariance doesn't start at 10e-5 eV, FIZCON bug!
     MAT=7434, MF=33, MT=851 (1): Thresh. cov.

```
ERROR(S) FOUND IN MAT=7434, MF=33, MT=851
   ENERGY INCORRECT                                SEQUENCE NUMBER     1
       EXPECT  1.00000E-05, FIND  3.57170E+06
   ENERGY INCORRECT                                SEQUENCE NUMBER     1
       EXPECT  1.00000E-05, FIND  3.57170E+06
... [10 more lines]
```

  6. Threshold reaction, so covariance doesn't start at 10e-5 eV, FIZCON bug!
     MAT=7434, MF=33, MT=852 (1): Thresh. cov.

```
ERROR(S) FOUND IN MAT=7434, MF=33, MT=852
   ENERGY INCORRECT                                SEQUENCE NUMBER     3
       EXPECT  1.00000E-05, FIND  5.14530E+02
```

7. Threshold reaction, so covariance doesn't start at 10e-5 eV, FIZCON bug!
   MAT=7434, MF=33, MT=853 (1): Thresh. cov.

```
ERROR(S) FOUND IN MAT=7434, MF=33, MT=853
   ENERGY INCORRECT                                SEQUENCE NUMBER     6
       EXPECT  1.00000E-05, FIND  5.14530E+02
```

8. Threshold reaction, so covariance doesn't start at 10e-5 eV, FIZCON bug!
   MAT=7434, MF=33, MT=854 (1): Thresh. cov.

```
ERROR(S) FOUND IN MAT=7434, MF=33, MT=854
   ENERGY INCORRECT                                SEQUENCE NUMBER     5
       EXPECT  1.00000E-05, FIND  5.14530E+02
```

9. Threshold reaction, so covariance doesn't start at 10e-5 eV, FIZCON bug!
   MAT=7434, MF=33, MT=855 (1): Thresh. cov.

```
ERROR(S) FOUND IN MAT=7434, MF=33, MT=855
   ENERGY INCORRECT                                SEQUENCE NUMBER     4
       EXPECT  1.00000E-05, FIND  5.14530E+02
```

10. Threshold reaction, so covariance doesn't start at 10e-5 eV, FIZCON bug!
    MAT=7434, MF=33, MT=856 (1): Thresh. cov.

```
ERROR(S) FOUND IN MAT=7434, MF=33, MT=856
   ENERGY INCORRECT                                SEQUENCE NUMBER     1
       EXPECT  1.00000E-05, FIND  5.14530E+02
```

- `fizcon` Errors:

1. Outgoing ZA is wrong
   MAT=7434, MF=10, MT= 18 (1): Bad ZA (b)

```
ERROR(S) FOUND IN MAT=7434, MF=10, MT= 18
   IZAP       0 NOT IN RANGE    3000 TO  120000
```

- `psyche` Warnings:

1. Level density in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 5.00000E+03. STRENGTH FUNCTION IS 2.12500E-04 / ENERGY = 5.00000E+03. STRENGTH FUNCTION IS 2.12500E-04 / DENSITY 1.67110E+01 SHOULD BE 1.62049E+01 (0): URR dens. (a)

```
FILE  2
   SECTION 151
        ENERGY =  5.00000E+03. STRENGTH FUNCTION IS  2.12500E-04
                  ENERGY =  5.00000E+03. STRENGTH FUNCTION IS  2.12500E-04
                                DENSITY  1.67110E+01 SHOULD BE  1.62049E+01
```

2. Level density in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 1.00000E+04. STRENGTH FUNCTION IS 2.12499E-04 / DENSITY 1.65858E+01 SHOULD BE 1.60836E+01 (0): URR dens. (a)

```
FILE  2
   SECTION 151
            ENERGY =  1.00000E+04. STRENGTH FUNCTION IS  2.12499E-04
                         DENSITY  1.65858E+01 SHOULD BE  1.60836E+01
```

3. Level density in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 2.00000E+04. STRENGTH FUNCTION IS 2.12500E-04 / DENSITY 1.63385E+01 SHOULD BE 1.58442E+01 (0): URR dens. (a)

```
FILE  2
   SECTION 151
            ENERGY =  2.00000E+04. STRENGTH FUNCTION IS  2.12500E-04
                         DENSITY  1.63385E+01 SHOULD BE  1.58442E+01
```

4. Level density in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 4.50000E+04. STRENGTH FUNCTION IS 2.12499E-04 / DENSITY 1.57367E+01 SHOULD BE 1.52615E+01 (0): URR dens. (a)

```
FILE  2
   SECTION 151
            ENERGY =  4.50000E+04. STRENGTH FUNCTION IS  2.12499E-04
                         DENSITY  1.57367E+01 SHOULD BE  1.52615E+01
```

5. Level density in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 5.00000E+03. STRENGTH FUNCTION IS 2.27000E-05 / ENERGY = 5.00000E+03. STRENGTH FUNCTION IS 2.27000E-05 / DENSITY 1.67110E+01 SHOULD BE 1.62049E+01 (0): URR dens. (a)

```
FILE  2
   SECTION 151
         ENERGY =  5.00000E+03. STRENGTH FUNCTION IS  2.27000E-05
                  ENERGY =  5.00000E+03. STRENGTH FUNCTION IS  2.27000E-05
                               DENSITY  1.67110E+01 SHOULD BE  1.62049E+01
```

6. Level density in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 1.00000E+04. STRENGTH FUNCTION IS 2.26999E-05 / DENSITY 1.65858E+01 SHOULD BE 1.60836E+01 (0): URR dens. (a)

```
FILE  2
   SECTION 151
            ENERGY =  1.00000E+04. STRENGTH FUNCTION IS  2.26999E-05
                         DENSITY  1.65858E+01 SHOULD BE  1.60836E+01
```

7. Level density in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 2.00000E+04. STRENGTH FUNCTION IS 2.26999E-05 / DENSITY 1.63385E+01 SHOULD BE 1.58442E+01 (0): URR dens. (a)

```
FILE  2
   SECTION 151
            ENERGY =  2.00000E+04. STRENGTH FUNCTION IS  2.26999E-05
                         DENSITY  1.63385E+01 SHOULD BE  1.58442E+01
```

8. Level density in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 4.50000E+04. STRENGTH FUNCTION IS 2.26999E-05 / DENSITY 1.57367E+01 SHOULD BE 1.52615E+01 (0): URR dens. (a)

```
FILE  2
   SECTION 151
            ENERGY =  4.50000E+04. STRENGTH FUNCTION IS  2.26999E-05
                         DENSITY  1.57367E+01 SHOULD BE  1.52615E+01
```

9. Level density in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 5.00000E+03. STRENGTH FUNCTION IS 2.27001E-05 / ENERGY = 5.00000E+03. STRENGTH FUNCTION IS 2.27001E-05 / DENSITY 1.06627E+01 SHOULD BE 9.72292E+00 (0): URR dens. (a)

```
FILE  2
   SECTION 151
         ENERGY =  5.00000E+03. STRENGTH FUNCTION IS  2.27001E-05
                  ENERGY =  5.00000E+03. STRENGTH FUNCTION IS  2.27001E-05
                               DENSITY  1.06627E+01 SHOULD BE  9.72292E+00
```

10. Level density in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 1.00000E+04. STRENGTH FUNCTION IS 2.26999E-05 / DENSITY 1.05826E+01 SHOULD BE 9.65016E+00 (0): URR dens. (a)

```
FILE  2
   SECTION 151
            ENERGY =  1.00000E+04. STRENGTH FUNCTION IS  2.26999E-05
                         DENSITY  1.05826E+01 SHOULD BE  9.65016E+00
```

11. Level density in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 2.00000E+04. STRENGTH FUNCTION IS 2.26999E-05 / DENSITY 1.04243E+01 SHOULD BE 9.50652E+00 (0): URR dens. (a)

```
FILE  2
   SECTION 151
            ENERGY =  2.00000E+04. STRENGTH FUNCTION IS  2.26999E-05
                         DENSITY  1.04243E+01 SHOULD BE  9.50652E+00
```

12. Level density in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 4.50000E+04. STRENGTH FUNCTION IS 2.26999E-05 / DENSITY 1.00391E+01 SHOULD BE 9.15692E+00 (0): URR dens. (a)

```
FILE  2
   SECTION 151
            ENERGY =  4.50000E+04. STRENGTH FUNCTION IS  2.26999E-05
                         DENSITY  1.00391E+01 SHOULD BE  9.15692E+00
```

13. Level density in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 5.00000E+03. STRENGTH FUNCTION IS 2.53001E-04 / ENERGY = 5.00000E+03. STRENGTH FUNCTION IS 2.53001E-04 / DENSITY 1.06627E+01 SHOULD BE 1.00266E+01 (0): URR dens. (a)

```
FILE  2
   SECTION 151
         ENERGY =  5.00000E+03. STRENGTH FUNCTION IS  2.53001E-04
                  ENERGY =  5.00000E+03. STRENGTH FUNCTION IS  2.53001E-04
                               DENSITY  1.06627E+01 SHOULD BE  1.00266E+01
```

14. Level density in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 1.00000E+04. STRENGTH FUNCTION IS 2.52999E-04 / DENSITY 1.05826E+01 SHOULD BE 9.95148E+00 (0): URR dens. (a)

```
FILE  2
   SECTION 151
            ENERGY =  1.00000E+04. STRENGTH FUNCTION IS  2.52999E-04
                         DENSITY  1.05826E+01 SHOULD BE  9.95148E+00
```

15. Level density in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 2.00000E+04. STRENGTH FUNCTION IS 2.52999E-04 / DENSITY 1.04243E+01 SHOULD BE 9.80310E+00 (0): URR dens. (a)

```
FILE  2
   SECTION 151
            ENERGY =  2.00000E+04. STRENGTH FUNCTION IS  2.52999E-04
                         DENSITY  1.04243E+01 SHOULD BE  9.80310E+00
```

16. Level density in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 4.50000E+04. STRENGTH FUNCTION IS 2.52999E-04 / DENSITY 1.00391E+01 SHOULD BE 9.44202E+00 (0): URR dens. (a)

```
FILE  2
   SECTION 151
            ENERGY =  4.50000E+04. STRENGTH FUNCTION IS  2.52999E-04
                         DENSITY  1.00391E+01 SHOULD BE  9.44202E+00
```

17. Level density in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 5.00000E+03. STRENGTH FUNCTION IS 2.52999E-04 / ENERGY = 5.00000E+03. STRENGTH FUNCTION IS 2.52999E-04 / DENSITY 8.35244E+00 SHOULD BE 7.16186E+00 (0): URR dens. (a)

```
FILE  2
   SECTION 151
         ENERGY =  5.00000E+03. STRENGTH FUNCTION IS  2.52999E-04
                  ENERGY =  5.00000E+03. STRENGTH FUNCTION IS  2.52999E-04
                               DENSITY  8.35244E+00 SHOULD BE  7.16186E+00
```

18. Level density in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 1.00000E+04. STRENGTH FUNCTION IS 2.53000E-04 / DENSITY 8.28933E+00 SHOULD BE 7.10820E+00 (0): URR dens. (a)

```
FILE  2
   SECTION 151
            ENERGY =  1.00000E+04. STRENGTH FUNCTION IS  2.53000E-04
                         DENSITY  8.28933E+00 SHOULD BE  7.10820E+00
```

19. Level density in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 2.00000E+04. STRENGTH FUNCTION IS 2.53000E-04 / DENSITY 8.16474E+00 SHOULD BE 7.00221E+00 (0): URR dens. (a)

```
FILE  2
   SECTION 151
            ENERGY =  2.00000E+04. STRENGTH FUNCTION IS  2.53000E-04
                         DENSITY  8.16474E+00 SHOULD BE  7.00221E+00
```

20. Level density in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 4.50000E+04. STRENGTH FUNCTION IS 2.53000E-04 / DENSITY 7.86159E+00 SHOULD BE 6.74430E+00 (0): URR dens. (a)

```
FILE  2
   SECTION 151
            ENERGY =  4.50000E+04. STRENGTH FUNCTION IS  2.53000E-04
                         DENSITY  7.86159E+00 SHOULD BE  6.74430E+00
```

- `psyche` Errors:

  1. A probability distribution is negative. This is bad.
     FILE 4 / SECTION 51 / DISTRIBUTION IS NEGATIVE / FROM -7.5000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 5.4836E-06 (0): Neg. prob.

```
FILE  4
   SECTION  51
        DISTRIBUTION IS NEGATIVE
                 FROM -7.5000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  5.4836E-06
```

  2. A probability distribution is negative. This is bad.
     FILE 4 / SECTION 51 / DISTRIBUTION IS NEGATIVE / FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00 (0): Neg. prob.

```
FILE  4
   SECTION  51
        DISTRIBUTION IS NEGATIVE
                 FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
                 FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
... [4 more lines]
```

  3. A probability distribution is negative. This is bad.
     FILE 4 / SECTION 52 / DISTRIBUTION IS NEGATIVE / FROM -9.9998E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 5.9605E-08 (0): Neg. prob.

```
FILE  4
   SECTION  52
        DISTRIBUTION IS NEGATIVE
                 FROM -9.9998E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  5.9605E-08
```

  4. A probability distribution is negative. This is bad.
     FILE 4 / SECTION 52 / DISTRIBUTION IS NEGATIVE / FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00 (0): Neg. prob.

```
FILE  4
   SECTION  52
        DISTRIBUTION IS NEGATIVE
                 FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
                 FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
... [12 more lines]
```

  5. A probability distribution is negative. This is bad.
     FILE 4 / SECTION 52 / DISTRIBUTION IS NEGATIVE / FROM -9.9902E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -2.9802E-08 (0): Neg. prob.

```
FILE  4
   SECTION  52
        DISTRIBUTION IS NEGATIVE
                 FROM -9.9902E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -2.9802E-08
```

6. A probability distribution is negative. This is bad.
FILE 4 / SECTION 52 / DISTRIBUTION IS NEGATIVE / FROM -7.5000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 1.1206E-05 (0): Neg. prob.

```
FILE  4
   SECTION  52
        DISTRIBUTION IS NEGATIVE
                 FROM -7.5000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  1.1206E-05
```

7. A probability distribution is negative. This is bad.
FILE 4 / SECTION 52 / DISTRIBUTION IS NEGATIVE / FROM -7.5000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 5.8413E-06 (0): Neg. prob.

```
FILE  4
   SECTION  52
        DISTRIBUTION IS NEGATIVE
                 FROM -7.5000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  5.8413E-06
```

8. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 747 / FROM -9.9875E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                        SEQUENCE NUMBER   747
                 FROM -9.9875E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
```

9. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 858 / FROM -9.9963E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 5.9605E-08 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                        SEQUENCE NUMBER   858
                 FROM -9.9963E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  5.9605E-08
```

10. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 913 / FROM -9.8212E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                        SEQUENCE NUMBER   913
                 FROM -9.8212E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
```

11. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 946 / FROM -9.3750E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 2.5630E-06 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                        SEQUENCE NUMBER   946
                 FROM -9.3750E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  2.5630E-06
```

12. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 946 / FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   946
                 FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
                 FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
... [29 more lines]
```

13. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 946 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   946
                 ENERGY BALANCE SUMMARY: Q =  -6.19100E+06         ENERGY BALANCE SUMMARY: Q =  -6.19100E+06
```

14. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 946 / ENERGY BALANCE SUMMARY: Q = -6.19100E+06 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   946
                 ENERGY BALANCE SUMMARY: Q =  -6.19100E+06
```

15. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 186 / FROM -9.9985E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   186
                 FROM -9.9985E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
```

16. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 803 / FROM -9.9966E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -5.9605E-08 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   803
                 FROM -9.9966E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -5.9605E-08
```

17. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 880 / FROM -9.9591E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 5.9605E-08 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   880
                 FROM -9.9591E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  5.9605E-08
```

18. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 935 / FROM -8.7500E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 5.6028E-06 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   935
                 FROM -8.7500E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  5.6028E-06
```

19. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 935 / FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   935
                 FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
                 FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
... [19 more lines]
```

20. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 935 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   935
                 ENERGY BALANCE SUMMARY: Q =  -1.42550E+07         ENERGY BALANCE SUMMARY: Q =  -1.42550E+07
```

21. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 935 / ENERGY BALANCE SUMMARY: Q = -1.42550E+07 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   935
                 ENERGY BALANCE SUMMARY: Q =  -1.42550E+07
```

22. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 902 / FROM -9.9950E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   902
                 FROM -9.9950E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
```

23. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 924 / FROM -7.5000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 2.5630E-06 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   924
                 FROM -7.5000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  2.5630E-06
```

24. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 924 / FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   924
                 FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
                 FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
... [20 more lines]
```

25. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 946 / FROM -9.3750E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 2.3842E-07 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   946
                 FROM -9.3750E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  2.3842E-07
```

26. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 957 / FROM -5.0000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -1.4216E-05 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   957
                 FROM -5.0000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -1.4216E-05
```

27. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 880 / FROM -9.8584E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 5.9605E-08 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   880
                 FROM -9.8584E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  5.9605E-08
```

28. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 913 / FROM -9.0213E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 1.1921E-07 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   913
                 FROM -9.0213E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  1.1921E-07
```

29. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 946 / FROM -8.7500E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 1.4305E-06 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   946
                 FROM -8.7500E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  1.4305E-06
```

30. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 869 / FROM -9.3228E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 1.7881E-07 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   869
                 FROM -9.3228E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  1.7881E-07
```

31. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 968 / FROM -5.0000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 2.9206E-06 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   968
                 FROM -5.0000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  2.9206E-06
```

32. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 968 / FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   968
                 FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
                 FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
... [29 more lines]
```

33. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 968 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   968
                 ENERGY BALANCE SUMMARY: Q =  -7.22200E+06         ENERGY BALANCE SUMMARY: Q =  -7.22200E+06
```

34. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 968 / ENERGY BALANCE SUMMARY: Q = -7.22200E+06 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   968
                 ENERGY BALANCE SUMMARY: Q =  -7.22200E+06
```

35. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 144 / FROM -9.9993E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 5.9605E-08 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   144
                 FROM -9.9993E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  5.9605E-08
```

36. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 197 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   197
                 ENERGY BALANCE SUMMARY: Q =  -2.09360E+07         ENERGY BALANCE SUMMARY: Q =  -2.09360E+07
```

37. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 197 / ENERGY BALANCE SUMMARY: Q = -2.09360E+07 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   197
                 ENERGY BALANCE SUMMARY: Q =  -2.09360E+07
```

38. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 263 / FROM -9.9782E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   263
                 FROM -9.9782E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
```

39. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 190 / FROM -9.9986E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 5.9605E-08 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   190
                 FROM -9.9986E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  5.9605E-08
```

40. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 836 / FROM -9.9948E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -2.9802E-08 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   836
                 FROM -9.9948E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -2.9802E-08
```

41. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 869 / FROM -9.6775E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   869
                 FROM -9.6775E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
```

42. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 902 / FROM -8.7500E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 1.1325E-06 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   902
                 FROM -8.7500E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  1.1325E-06
```

43. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 902 / FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   902
                 FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
                 FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
... [6 more lines]
```

44. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 913 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   913
                 ENERGY BALANCE SUMMARY: Q =  -1.32850E+07         ENERGY BALANCE SUMMARY: Q =  -1.32850E+07
```

45. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 913 / ENERGY BALANCE SUMMARY: Q = -1.32850E+07 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   913
                 ENERGY BALANCE SUMMARY: Q =  -1.32850E+07
```

46. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 792 / FROM -9.9999E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   792
                 FROM -9.9999E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
```

47. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 1012 / FROM -9.9219E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -1.2219E-06 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER  1012
                 FROM -9.9219E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -1.2219E-06
```

48. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 1012 / FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER  1012
                 FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
                 FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
... [15 more lines]
```

49. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 1023 / FROM -7.5000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 5.9605E-07 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER  1023
                 FROM -7.5000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  5.9605E-07
```

50. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 1023 / FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER  1023
                 FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
```

```
                FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
... [8 more lines]
```

51. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 1034 / FROM -7.5000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -2.9802E-07 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                        SEQUENCE NUMBER  1034
                FROM -7.5000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -2.9802E-07
```

52. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 1034 / FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                        SEQUENCE NUMBER  1034
                FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
                FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
... [2 more lines]
```

53. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 869 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                        SEQUENCE NUMBER   869
                ENERGY BALANCE SUMMARY: Q =   0.00000E+00         ENERGY BALANCE SUMMARY: Q =   0.00000E+00
                ENERGY BALANCE SUMMARY: Q =   7.41100E+06         ENERGY BALANCE SUMMARY: Q =   7.41100E+06
```

54. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 869 / ENERGY BALANCE SUMMARY: Q = 7.41100E+06 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                        SEQUENCE NUMBER   869
                ENERGY BALANCE SUMMARY: Q =   7.41100E+06
```

55. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 234 / FROM -9.9853E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 5.9605E-08 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                        SEQUENCE NUMBER   234
                FROM -9.9853E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  5.9605E-08
```

56. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 1001

/ FROM -7.5000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 3.9339E-06 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER  1001
                 FROM -7.5000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  3.9339E-06
```

57. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 1001 / FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER  1001
                 FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
                 FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
... [24 more lines]
```

58. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 836 / FROM -9.9997E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   836
                 FROM -9.9997E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
```

59. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 957 / FROM -8.2227E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 6.5565E-07 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   957
                 FROM -8.2227E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  6.5565E-07
```

60. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 968 / FROM -9.3750E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 1.0133E-06 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   968
                 FROM -9.3750E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  1.0133E-06
```

61. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 957 / FROM -7.5000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 2.7418E-06 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   957
                 FROM -7.5000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  2.7418E-06
```

62. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 957 / FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   957
                 FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
                 FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
... [12 more lines]
```

63. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 979 / FROM -5.0000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -2.4736E-06 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   979
                 FROM -5.0000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -2.4736E-06
```

64. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 979 / FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   979
                 FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
                 FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
... [12 more lines]
```

65. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 1023 / FROM -5.0000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 5.3644E-07 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER  1023
                 FROM -5.0000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  5.3644E-07
```

66. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 825 / FROM -9.9738E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 1.1921E-07 (0): Neg. prob.

```
FILE  6
   SECTION   5
```

```
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   825
                FROM -9.9738E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  1.1921E-07
```

67. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 924 / FROM -8.7500E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -1.6093E-06 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   924
                FROM -8.7500E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -1.6093E-06
```

68. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 935 / FROM -7.5000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 1.7881E-06 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   935
                FROM -7.5000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  1.7881E-06
```

69. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 946 / FROM -5.0000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -2.3246E-06 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   946
                FROM -5.0000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -2.3246E-06
```

70. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 957 / FROM -7.5000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -4.2319E-06 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   957
                FROM -7.5000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -4.2319E-06
```

71. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 979 / FROM -7.5000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -1.0431E-06 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   979
                FROM -7.5000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -1.0431E-06
```

72. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 990 / FROM -5.0000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -8.9407E-08

(0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   990
                 FROM -5.0000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -8.9407E-08
```

73. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 990 / FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER   990
                 FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
                 FROM -1.0000E+00 TO -1.0000E+00 NEGATIVE PROBABILITY IS -0.0000E+00
... [14 more lines]
```

74. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 1001 / FROM -7.5000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 2.5034E-06 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER  1001
                 FROM -7.5000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  2.5034E-06
```

75. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 1012 / FROM -7.5000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -4.7684E-07 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER  1012
                 FROM -7.5000E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS -4.7684E-07
```

76. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 1012 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER  1012
                 ENERGY BALANCE SUMMARY: Q =  -2.88000E+05         ENERGY BALANCE SUMMARY: Q =  -2.88000E+05
                 ENERGY BALANCE SUMMARY: Q =   9.07000E+06         ENERGY BALANCE SUMMARY: Q =   9.07000E+06
```

77. A probability distribution is negative. This is bad.
FILE 6 / SECTION 5 / DISTRIBUTION IS NEGATIVE SEQUENCE NUMBER 1012 / ENERGY BALANCE SUMMARY: Q = 9.07000E+06 (0): Neg. prob.

```
FILE  6
   SECTION   5
        DISTRIBUTION IS NEGATIVE                          SEQUENCE NUMBER  1012
                 ENERGY BALANCE SUMMARY: Q =   9.07000E+06
```

- `fudge-4.0` Warnings:

  1. Generic warning message
     Reading ENDF file: ../n-074_W_183.endf (Error # 0): Warning

     ```
     WARNING: Encountered MT=18 MF=8/10 data (not yet accepted in ENDF format). See option --ignoreMF10Fission
     ```

  2. A covariance format not yet supported by fudge (LRF=7 covariances)
     Reading ENDF file: ../n-074_W_183.endf (Error # 1): Cov. unimp. (e)

     ```
     WARNING: skipping LRF=7 resonance covariances!
     ```

  3. Dead link?
     resonances / resolved / R_Matrix_Limited / channels / channel gamma + W184 (Error # 0): unresolvedLink

     ```
     WARNING: Unresolved link to /reactionSuite/reactions/reaction[@label='59']
     ```

  4. Dead link?
     resonances / resolved / R_Matrix_Limited / channel n + W183 (Error # 0): unresolvedLink

     ```
     WARNING: Unresolved link to /reactionSuite/reactions/reaction[@label='0']
     ```

  5. Missing a channel with a particular angular momenta combination
     resonances / resolved (Error # 2): missingResonanceChannel

     ```
     WARNING: Missing a channel with angular momenta combination L = 1, J = 0.0 and S = 1.0 for "n + W183"
     ```

  6. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
     Section 1 (n + W183): / Form 'eval': / Component 0 (Error # 0): Condition num.

     ```
     WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
     ```

  7. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
     Section 1 (n + W183): / Form 'eval': / Component 1 (Error # 0): Condition num.

     ```
     WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
     ```

  8. The on-diagonal elements of a covariance (the varience...) were very big.
     Section 28 (W184 + gamma): / Form 'eval': (Error # 0): Large variance

     ```
     WARNING: Encountered very large variance (2.367740e+02%) at index 36.
     ```

  9. The on-diagonal elements of a covariance (the varience...) were very big.
     Section 35 (lump0): / Form 'eval': (Error # 0): Large variance

     ```
     WARNING: Encountered very large variance (1.582390e+02%) at index 4.
     WARNING: Encountered very large variance (2.005680e+03%) at index 5.
     WARNING: Encountered very large variance (5.324610e+03%) at index 6.
     WARNING: Encountered very large variance (9.155040e+02%) at index 7.
     ```

  10. The on-diagonal elements of a covariance (the varience...) were very big.
      Section 55 (lump5): / Form 'eval': (Error # 0): Large variance

```
WARNING: Encountered very large variance (2.149830e+02%) at index 40.
WARNING: Encountered very large variance (6.497750e+02%) at index 41.
```

11. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 56 (n + W183 [angular distribution]): / Form 'eval': (Error # 2): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
```

12. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 57 (n + W183_e1 [angular distribution]): / Form 'eval': (Error # 2): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
```

- `fudge-4.0` Errors:

1. The spin statistical weights are off, indicating missing channels
resonances / resolved (Error # 1): badSpinStatisticalWeights

```
WARNING: The spin statical weights for L=1 sums to 2.75, but should sum to 3.0.  You have too few channels for r
```

2. Found a negative probability
reaction label 0: n + W183 / Product: n / Distribution: / angularTwoBody - regions2d: / region index 0: XYs2d (Error # 0): Negative prob.

```
WARNING: Negative probabilities encountered. Incident energy: 4.8e7 eV, worst case: -2.16402089667e-06
WARNING: Negative probabilities encountered. Incident energy: 5.5e7 eV, worst case: -3.75513575622e-06
WARNING: Negative probabilities encountered. Incident energy: 6.e7 eV, worst case: -2.00902639673e-06
WARNING: Negative probabilities encountered. Incident energy: 7.e7 eV, worst case: -1.46959391947e-05
```

3. Energy range of data set does not match cross section range
reaction label 1: n + W183_e1 / Product: n / Distribution: / angularTwoBody - XYs2d: (Error # 0): Domain mismatch (a)

```
WARNING: Domain doesn't match the cross section domain: (46736.26 -> 150000000.0) vs (46736.3 -> 150000000.0)
```

4. Energy range of data set does not match cross section range
reaction label 2: n + W183_e2 / Product: n / Distribution: / angularTwoBody - XYs2d: (Error # 0): Domain mismatch (a)

```
WARNING: Domain doesn't match the cross section domain: (99626.26 -> 150000000.0) vs (99626.3 -> 150000000.0)
```

5. Found a negative probability
reaction label 3: n + W183_e3 / Product: n / Distribution: / angularTwoBody - XYs2d: (Error # 0): Negative prob.

```
WARNING: Negative probabilities encountered. Incident energy: 1.5e8 eV, worst case: -5.33946502371e-06
```

6. Found a negative probability
reaction label 4: n + W183_e4 / Product: n / Distribution: / angularTwoBody - XYs2d: (Error # 0): Negative prob.

```
WARNING: Negative probabilities encountered. Incident energy: 1.5e8 eV, worst case: -3.7836533106e-07
```

7. Energy range of data set does not match cross section range
reaction label 9: n + W183_e9 / Product: n / Distribution: / angularTwoBody - XYs2d: (Error # 0): Domain mismatch (a)

```
WARNING: Domain doesn't match the cross section domain: (455567.9 -> 150000000.0) vs (455568.0 -> 150000000.0)
```

8. Found a negative probability
reaction label 12: n + (W183_c -> W183 + gamma) / Product: n / Distribution: / energyAngular - XYs3d: (Error # 0): Negative prob.

```
WARNING: Negative probabilities encountered. Incident energy: 8.e7 eV, worst case: -3.24596759917e-13
WARNING: Negative probabilities encountered. Incident energy: 1.15e8 eV, worst case: -1.8670986961e-12
WARNING: Negative probabilities encountered. Incident energy: 1.3e8 eV, worst case: -1.22373051753e-12
WARNING: Negative probabilities encountered. Incident energy: 1.5e8 eV, worst case: -3.60230078209e-14
```

9. Calculated and tabulated Q values disagree.
reaction label 13: n[multiplicity:'2'] + W182 + gamma (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -5637392.18649292 eV vs -6.191e6 eV!
```

10. Found a negative probability
reaction label 13: n[multiplicity:'2'] + W182 + gamma / Product: n / Distribution: / energyAngular - XYs3d: (Error # 0): Negative prob.

```
WARNING: Negative probabilities encountered. Incident energy: 8.e7 eV, worst case: -6.35817151079e-13
WARNING: Negative probabilities encountered. Incident energy: 1.3e8 eV, worst case: -5.09245000008e-14
WARNING: Negative probabilities encountered. Incident energy: 1.5e8 eV, worst case: -6.34900802989e-12
```

11. Calculated and tabulated Q values disagree.
reaction label 14: n[multiplicity:'3'] + W181 + gamma (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -14093480.46624756 eV vs -1.4255e7 eV!
```

12. Energy range of data set does not match cross section range
reaction label 14: n[multiplicity:'3'] + W181 + gamma / Product: n / Distribution: / energyAngular - XYs3d: (Error # 0): Domain mismatch (a)

```
WARNING: Domain doesn't match the cross section domain: (14333590.0 -> 150000000.0) vs (14333600.0 -> 150000000.
```

13. Energy range of data set does not match cross section range
reaction label 14: n[multiplicity:'3'] + W181 + gamma / Product: W181 / Distribution: / uncorrelated - energy - XYs2d: (Error # 0): Domain mismatch (a)

```
WARNING: Domain doesn't match the cross section domain: (14333590.0 -> 150000000.0) vs (14333600.0 -> 150000000.
```

14. Energy range of data set does not match cross section range
reaction label 14: n[multiplicity:'3'] + W181 + gamma / Product: gamma / Multiplicity: (Error # 0): Domain mismatch (a)

```
WARNING: Domain doesn't match the cross section domain: (14333590.0 -> 150000000.0) vs (14333600.0 -> 150000000.
```

15. Energy range of data set does not match cross section range
reaction label 14: n[multiplicity:'3'] + W181 + gamma / Product: gamma / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

```
WARNING: Domain doesn't match the cross section domain: (14333590.0 -> 150000000.0) vs (14333600.0 -> 150000000.
```

16. Energy range of data set does not match cross section range
reaction label 14: n[multiplicity:'3'] + W181 + gamma / Product: gamma / uncorrelated - energy - XYs2d: (Error # 0): Domain mismatch (a)

```
WARNING: Domain doesn't match the cross section domain: (14333590.0 -> 150000000.0) vs (14333600.0 -> 150000000.
```

17. Calculated and tabulated Q values disagree.
reaction label 15: n[multiplicity:'4'] + W180 + gamma (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -20670438.0171814 eV vs -2.0936e7 eV!
```

18. Found a negative probability
reaction label 15: n[multiplicity:'4'] + W180 + gamma / Product: n / Distribution: / energyAngular - XYs3d: (Error # 0): Negative prob.

```
WARNING: Negative probabilities encountered. Incident energy: 1.15e8 eV, worst case: -1.70199999976e-14
WARNING: Negative probabilities encountered. Incident energy: 1.5e8 eV, worst case: -1.20828500016e-14
```

19. If an outgoing energy distribution ends with more than one energy with probability=0, proper unitbase treatment is unclear. Distribution should end with exactly one P=0 point.
reaction label 15: n[multiplicity:'4'] + W180 + gamma / Product: n / Distribution: (Error # 1): extraOutgoingEnergy

```
WARNING: Extra zero-probability outgoing energies found at incident energy 1.5e8 eV
```

20. Calculated and tabulated Q values disagree.
reaction label 16: n + H1 + Ta182 + gamma (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -6733726.617401123 eV vs -7.222e6 eV!
```

21. Energy range of data set does not match cross section range
reaction label 16: n + H1 + Ta182 + gamma / Product: n / Distribution: / energyAngular - XYs3d: (Error # 0): Domain mismatch (a)

```
WARNING: Domain doesn't match the cross section domain: (7261817.0 -> 150000000.0) vs (7261820.0 -> 150000000.0)
```

22. Energy range of data set does not match cross section range
reaction label 16: n + H1 + Ta182 + gamma / Product: H1 / Distribution: / energyAngular - XYs3d: (Error # 0): Domain mismatch (a)

```
WARNING: Domain doesn't match the cross section domain: (7261817.0 -> 150000000.0) vs (7261820.0 -> 150000000.0)
```

23. Energy range of data set does not match cross section range
reaction label 16: n + H1 + Ta182 + gamma / Product: Ta182 / Distribution: / uncorrelated - energy - XYs2d: (Error # 0): Domain mismatch (a)

```
WARNING: Domain doesn't match the cross section domain: (7261817.0 -> 150000000.0) vs (7261820.0 -> 150000000.0)
```

24. Energy range of data set does not match cross section range
reaction label 16: n + H1 + Ta182 + gamma / Product: gamma / Multiplicity: (Error # 0): Domain mismatch (a)

```
WARNING: Domain doesn't match the cross section domain: (7261817.0 -> 150000000.0) vs (7261820.0 -> 150000000.0)
```

25. Energy range of data set does not match cross section range
reaction label 16: n + H1 + Ta182 + gamma / Product: gamma / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

```
WARNING: Domain doesn't match the cross section domain: (7261817.0 -> 150000000.0) vs (7261820.0 -> 150000000.0)
```

26. Energy range of data set does not match cross section range
reaction label 16: n + H1 + Ta182 + gamma / Product: gamma / uncorrelated - energy - XYs2d: (Error # 0): Domain mismatch (a)

```
WARNING: Domain doesn't match the cross section domain: (7261817.0 -> 150000000.0) vs (7261820.0 -> 150000000.0)
```

27. Calculated and tabulated Q values disagree.
reaction label 17: H1 + Ta183 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -156769.0664672852 eV vs -2.88e5 eV!
```

28. Energy range of data set does not match cross section range
reaction label 17: H1 + Ta183 / Product: H1 / Distribution: / angularTwoBody - XYs2d: (Error # 0): Domain mismatch (a)

```
WARNING: Domain doesn't match the cross section domain: (289587.8 -> 150000000.0) vs (289588.0 -> 150000000.0)
```

29. Calculated and tabulated Q values disagree.
reaction label 18: H1 + Ta183_e1 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -229939.0664672852 eV vs -361170. eV!
```

30. Calculated and tabulated Q values disagree.
reaction label 19: H1 + Ta183_e2 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -299969.0664672852 eV vs -4.312e5 eV!
```

31. Calculated and tabulated Q values disagree.
reaction label 20: H1 + Ta183_e3 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -525059.0664672852 eV vs -656290. eV!
```

32. Calculated and tabulated Q values disagree.
reaction label 21: H1 + Ta183_e4 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -615839.0664672852 eV vs -747070. eV!
```

33. Energy range of data set does not match cross section range
reaction label 21: H1 + Ta183_e4 / Product: H1 / Distribution: / angularTwoBody - XYs2d: (Error # 0): Domain mismatch (a)

```
WARNING: Domain doesn't match the cross section domain: (751188.8 -> 150000000.0) vs (751189.0 -> 150000000.0)
```

34. Calculated and tabulated Q values disagree.
reaction label 22: H1 + Ta183_e5 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -702339.0664672852 eV vs -833570. eV!
```

35. Energy range of data set does not match cross section range
reaction label 22: H1 + Ta183_e5 / Product: H1 / Distribution: / angularTwoBody - XYs2d: (Error # 0): Domain mismatch (a)

```
WARNING: Domain doesn't match the cross section domain: (838165.8 -> 150000000.0) vs (838166.0 -> 150000000.0)
```

36. Calculated and tabulated Q values disagree.
reaction label 23: H1 + Ta183_e6 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -729579.0664672852 eV vs -860810. eV!
```

37. Energy range of data set does not match cross section range
reaction label 23: H1 + Ta183_e6 / Product: H1 / Distribution: / angularTwoBody - XYs2d: (Error # 0): Domain mismatch (a)

```
WARNING: Domain doesn't match the cross section domain: (865555.9 -> 150000000.0) vs (865556.0 -> 150000000.0)
```

38. Calculated and tabulated Q values disagree.
reaction label 24: H1 + Ta183_e7 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -887689.0664672852 eV vs -1018920. eV!
```

39. Energy range of data set does not match cross section range
reaction label 24: H1 + Ta183_e7 / Product: H1 / Distribution: / angularTwoBody - XYs2d: (Error # 0): Domain mismatch (a)

```
WARNING: Domain doesn't match the cross section domain: (1024538.0 -> 150000000.0) vs (1024540.0 -> 150000000.0)
```

40. Calculated and tabulated Q values disagree.
reaction label 25: H1 + Ta183_e8 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -891829.0664672852 eV vs -1023060. eV!
```

41. Calculated and tabulated Q values disagree.
reaction label 26: H1 + Ta183_e9 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -963189.0664672852 eV vs -1094420. eV!
```

42. Calculated and tabulated Q values disagree.
reaction label 27: H1 + Ta183_e10 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -1013699.066467285 eV vs -1144930. eV!
```

43. Calculated and tabulated Q values disagree.
reaction label 28: H1 + Ta183_e11 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -1096959.066467285 eV vs -1228190. eV!
```

44. Calculated and tabulated Q values disagree.
reaction label 29: H1 + Ta183_e12 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -1105409.066467285 eV vs -1236640. eV!
```

45. Energy range of data set does not match cross section range
reaction label 29: H1 + Ta183_e12 / Product: H1 / Distribution: / angularTwoBody - XYs2d: (Error # 0): Domain mismatch (a)

```
WARNING: Domain doesn't match the cross section domain: (1243458.0 -> 150000000.0) vs (1243460.0 -> 150000000.0)
```

46. Calculated and tabulated Q values disagree.
reaction label 30: H1 + Ta183_e13 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -1116839.066467285 eV vs -1248070. eV!
```

47. Calculated and tabulated Q values disagree.
reaction label 31: H1 + Ta183_e14 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -1128239.066467285 eV vs -1259470. eV!
```

48. Calculated and tabulated Q values disagree.
reaction label 32: H1 + (Ta183_c ->Ta183 + gamma) (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -1128239.066467285 eV vs -1259470. eV!
```

49. If an outgoing energy distribution ends with more than one energy with probability=0, proper unitbase treatment is unclear. Distribution should end with exactly one P=0 point.
reaction label 32: H1 + (Ta183_c ->Ta183 + gamma) / Product: H1 / Distribution: / energyAngular - XYs3d: (Error # 0): extraOutgoingEnergy

```
WARNING: Extra zero-probability outgoing energies found at incident energy 5.5e7 eV
WARNING: Extra zero-probability outgoing energies found at incident energy 7.e7 eV
WARNING: Extra zero-probability outgoing energies found at incident energy 8.e7 eV
```

50. Found a negative probability
reaction label 32: H1 + (Ta183_c ->Ta183 + gamma) / Product: H1 / Distribution: (Error # 1): Negative prob.

```
WARNING: Negative probabilities encountered. Incident energy: 9.e7 eV, worst case: -2.50784999996e-13
WARNING: Negative probabilities encountered. Incident energy: 1.e8 eV, worst case: -4.92927095275e-12
WARNING: Negative probabilities encountered. Incident energy: 1.15e8 eV, worst case: -2.30592000131e-11
WARNING: Negative probabilities encountered. Incident energy: 1.3e8 eV, worst case: -2.40354338325e-11
        ... plus 1 more instances of this message
```

51. Calculated and tabulated Q values disagree.
reaction label 33: He4 + Hf180 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 9191152.534454346 eV vs 9.07e6 eV!
```

52. Calculated and tabulated Q values disagree.
reaction label 34: He4 + Hf180_e1 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 9097822.534454346 eV vs 8976670. eV!
```

53. Calculated and tabulated Q values disagree.
reaction label 35: He4 + Hf180_e2 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 8882572.534454346 eV vs 8761420. eV!
```

54. Calculated and tabulated Q values disagree.
reaction label 36: He4 + Hf180_e3 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 8550292.534454346 eV vs 8429140. eV!
```

55. Calculated and tabulated Q values disagree.
reaction label 37: He4 + Hf180_e4 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 8107222.534454346 eV vs 7986070. eV!
```

56. Calculated and tabulated Q values disagree.
reaction label 38: He4 + Hf180_e5 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 8089152.534454346 eV vs 7.968e6 eV!
```

57. Calculated and tabulated Q values disagree.
reaction label 39: He4 + Hf180_e6 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 8083552.534454346 eV vs 7.9624e6 eV!
```

58. Calculated and tabulated Q values disagree.
reaction label 40: He4 + Hf180_e7 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 8049672.534454346 eV vs 7928520. eV!
```

59. Calculated and tabulated Q values disagree.
reaction label 41: He4 + Hf180_e8 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 8027072.534454346 eV vs 7905920. eV!
```

60. Calculated and tabulated Q values disagree.
reaction label 42: He4 + Hf180_e9 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 8007752.534454346 eV vs 7.8866e6 eV!
```

61. Calculated and tabulated Q values disagree.
reaction label 43: He4 + Hf180_e10 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 7998552.534454346 eV vs 7.8774e6 eV!
```

62. Calculated and tabulated Q values disagree.
reaction label 44: He4 + Hf180_e11 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 7991452.534454346 eV vs 7.8703e6 eV!
```

63. Calculated and tabulated Q values disagree.
reaction label 45: He4 + Hf180_e12 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 7930482.534454346 eV vs 7809330. eV!
```

64. Calculated and tabulated Q values disagree.
reaction label 46: He4 + Hf180_e13 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 7900142.534454346 eV vs 7778990. eV!
```

65. Calculated and tabulated Q values disagree.
reaction label 47: He4 + Hf180_e14 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 7890802.534454346 eV vs 7769650. eV!
```

66. Calculated and tabulated Q values disagree.
reaction label 48: He4 + Hf180_e15 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 7875352.534454346 eV vs 7.7542e6 eV!
```

67. Calculated and tabulated Q values disagree.
reaction label 49: He4 + Hf180_e16 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 7837052.534454346 eV vs 7.7159e6 eV!
```

68. Calculated and tabulated Q values disagree.
reaction label 50: He4 + Hf180_e17 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 7821532.534454346 eV vs 7700380. eV!
```

69. Calculated and tabulated Q values disagree.
reaction label 51: He4 + Hf180_e18 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 7816822.534454346 eV vs 7695670. eV!
```

70. Calculated and tabulated Q values disagree.
reaction label 52: He4 + Hf180_e19 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 7809592.534454346 eV vs 7688440. eV!
```

71. Calculated and tabulated Q values disagree.
reaction label 53: He4 + Hf180_e20 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 7781912.534454346 eV vs 7660760. eV!
```

72. Calculated and tabulated Q values disagree.
reaction label 54: He4 + Hf180_e21 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 7781752.534454346 eV vs 7.6606e6 eV!
```

73. Calculated and tabulated Q values disagree.
reaction label 55: He4 + Hf180_e22 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 7770052.534454346 eV vs 7.6489e6 eV!
```

74. Calculated and tabulated Q values disagree.
reaction label 56: He4 + Hf180_e23 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 7761372.534454346 eV vs 7640220. eV!
```

75. Calculated and tabulated Q values disagree.
reaction label 57: He4 + Hf180_e24 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 7747152.534454346 eV vs 7.626e6 eV!
```

76. Calculated and tabulated Q values disagree.
reaction label 58: He4 + (Hf180_c ->Hf180 + gamma) (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 7747152.534454346 eV vs 7.626e6 eV!
```

77. Calculated and tabulated Q values disagree.
reaction label 59: W184 + gamma (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 7794257.57119751 eV vs 7.411e6 eV!
```

78. Calculated and tabulated Q values disagree.
reaction label 60: n[multiplicity:'2'] + H1 + Ta181 + gamma (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -13310684.16830444 eV vs -1.3285e7 eV!
```

79. Found a negative probability
reaction label 60: n[multiplicity:'2'] + H1 + Ta181 + gamma / Product: n / Distribution: / energyAngular - XYs3d: (Error # 0): Negative prob.

```
WARNING: Negative probabilities encountered. Incident energy: 1.5e8 eV, worst case: -2.81464999987e-17
```

80. Found a negative probability
reaction label 60: n[multiplicity:'2'] + H1 + Ta181 + gamma / Product: H1 / Distribution: / energyAngular - XYs3d: (Error # 0): Negative prob.

```
WARNING: Negative probabilities encountered. Incident energy: 1.15e8 eV, worst case: -6.26899999825e-14
WARNING: Negative probabilities encountered. Incident energy: 1.3e8 eV, worst case: -2.7168344176e-14
WARNING: Negative probabilities encountered. Incident energy: 1.5e8 eV, worst case: -3.46863070643e-12
```

81. If an outgoing energy distribution ends with more than one energy with probability=0, proper unitbase treatment is unclear. Distribution should end with exactly one P=0 point.
reaction label 60: n[multiplicity:'2'] + H1 + Ta181 + gamma / Product: H1 / Distribution: (Error # 1): extraOutgoingEnergy

```
WARNING: Extra zero-probability outgoing energies found at incident energy 1.15e8 eV
WARNING: Extra zero-probability outgoing energies found at incident energy 1.3e8 eV
WARNING: Extra zero-probability outgoing energies found at incident energy 1.5e8 eV
```

82. Since the min allowed variance is 0, this means really you have a negative variance!!!!
Section 56 (n + W183 [angular distribution]): / Form 'eval': / LegendreLValue L=1 vs 1 (Error # 0): Very small variance

```
WARNING: Encountered very small variance (-3.275670e-04%) at index 20.
WARNING: Encountered very small variance (-2.239500e-05%) at index 30.
WARNING: Encountered very small variance (-1.161750e-04%) at index 31.
WARNING: Encountered very small variance (-4.194680e-05%) at index 33.
        ... plus 6 more instances of this message
```

83. A covariance matrix was not positive semi-definite, so it has negative eigenvalues.
Section 56 (n + W183 [angular distribution]): / Form 'eval': (Error # 1): Bad evs

```
WARNING: 16 negative eigenvalues! Worst case = -1.640532e-02
```

84. Since the min allowed variance is 0, this means really you have a negative variance!!!!
Section 57 (n + W183_e1 [angular distribution]): / Form 'eval': / LegendreLValue L=1 vs 1 (Error # 0): Very small variance

```
WARNING: Encountered very small variance (-2.716400e-03%) at index 13.
WARNING: Encountered very small variance (-4.861880e-04%) at index 17.
WARNING: Encountered very small variance (-1.544840e-03%) at index 18.
WARNING: Encountered very small variance (-1.812000e-03%) at index 19.
        ... plus 12 more instances of this message
```

85. A covariance matrix was not positive semi-definite, so it has negative eigenvalues.
Section 57 (n + W183_e1 [angular distribution]): / Form 'eval': (Error # 1): Bad evs

```
WARNING: 14 negative eigenvalues! Worst case = -6.088575e-02
```

- `njoy2012` Warnings:

1. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (0): HEATR/hinit (4)

```
 ---message from hinit---mf6, mt102 does not give recoil za= 74184
                         photon momentum recoil used.
```

2. Coefficient mismatch of some sort
covr...process covariance data (1): COVR/matshd (2)

```
 ---message from matshd---processing of mat/mt 7434/  1 vs. mat1/mt1 7434/  2
                         largest coefficient= -6.08985E+00 at index 182 191
```

3. The number of coefficients was too large in a covariance
covr...process covariance data (2): Cov:Too many coeff.

```
 ---message from matshd--- 640 coefficients > 1
                         reset and continue.
```

4. The number of coefficients was too large in a covariance
covr...process covariance data (3): Cov:Too many coeff.

```
 ---message from matshd--- 132 coefficients > 2
                         reset and continue
```

5. Coefficient mismatch of some sort
covr...process covariance data (4): COVR/matshd (2)

```
 ---message from matshd---processing of mat/mt 7434/  1 vs. mat1/mt1 7434/ 17
                         largest coefficient= -4.55147E+02 at index 603 573
```

6. The number of coefficients is too big.
covr...process covariance data (5): COVR/matshd (3)

```
 ---message from matshd---  34 coefficients > 1
                         reset and continue.
```

7. The number of coefficients was too large in a covariance
covr...process covariance data (6): Cov:Too many coeff.

```
 ---message from matshd--- 729 coefficients > 2
                         reset and continue
```

8. Coefficient mismatch of some sort
covr...process covariance data (7): COVR/matshd (2)

```
 ---message from matshd---processing of mat/mt 7434/  1 vs. mat1/mt1 7434/102
                          largest coefficient=  2.25900E+00 at index 191 218
```

9. The number of coefficients was too large in a covariance
covr...process covariance data (8): Cov:Too many coeff.

```
 ---message from matshd---3300 coefficients > 1
                          reset and continue.
```

10. The number of coefficients is too big.
covr...process covariance data (9): COVR/matshd (3)

```
 ---message from matshd---   4 coefficients > 2
                          reset and continue
```

11. Coefficient mismatch of some sort
covr...process covariance data (10): COVR/matshd (2)

```
 ---message from matshd---processing of mat/mt 7434/  2 vs. mat1/mt1 7434/ 17
                          largest coefficient= -3.60719E+02 at index 455 573
```

12. The number of coefficients is too big.
covr...process covariance data (11): COVR/matshd (3)

```
 ---message from matshd---  37 coefficients > 1
                          reset and continue.
```

13. The number of coefficients was too large in a covariance
covr...process covariance data (12): Cov:Too many coeff.

```
 ---message from matshd--- 678 coefficients > 2
                          reset and continue
```

14. Coefficient mismatch of some sort
covr...process covariance data (13): COVR/matshd (2)

```
 ---message from matshd---processing of mat/mt 7434/  2 vs. mat1/mt1 7434/102
                          largest coefficient=  2.11396E+01 at index 191 218
```

15. The number of coefficients was too large in a covariance
covr...process covariance data (14): Cov:Too many coeff.

```
 ---message from matshd---1045 coefficients > 1
                          reset and continue.
```

16. The number of coefficients was too large in a covariance
covr...process covariance data (15): Cov:Too many coeff.

```
 ---message from matshd--- 573 coefficients > 2
                          reset and continue
```

17. The number of coefficients was too large in a covariance
covr...process covariance data (16): Cov:Too many coeff.

```
 ---message from matshd--- 216 coefficients > 2
                           reset and continue
```

18. Coefficient mismatch of some sort
    covr...process covariance data (17): COVR/matshd (2)

```
 ---message from matshd---processing of mat/mt 7434/ 17 vs. mat1/mt1 7434/ 51
                           largest coefficient=  7.36095E+01 at index 573 549
```

19. The number of coefficients is too big.
    covr...process covariance data (18): COVR/matshd (3)

```
 ---message from matshd---  58 coefficients > 1
                           reset and continue.
```

20. The number of coefficients was too large in a covariance
    covr...process covariance data (19): Cov:Too many coeff.

```
 ---message from matshd--- 437 coefficients > 2
                           reset and continue
```

21. Coefficient mismatch of some sort
    covr...process covariance data (20): COVR/matshd (2)

```
 ---message from matshd---processing of mat/mt 7434/ 17 vs. mat1/mt1 7434/102
                           largest coefficient= -3.22677E+02 at index 573 470
```

22. The number of coefficients is too big.
    covr...process covariance data (21): COVR/matshd (3)

```
 ---message from matshd---  36 coefficients > 1
                           reset and continue.
```

23. The number of coefficients was too large in a covariance
    covr...process covariance data (22): Cov:Too many coeff.

```
 ---message from matshd--- 616 coefficients > 2
                           reset and continue
```

24. Coefficient mismatch of some sort
    covr...process covariance data (23): COVR/matshd (2)

```
 ---message from matshd---processing of mat/mt 7434/ 17 vs. mat1/mt1 7434/851
                           largest coefficient=  4.70539E+02 at index 573 628
```

25. The number of coefficients is too big.
    covr...process covariance data (24): COVR/matshd (3)

```
 ---message from matshd---  29 coefficients > 1
                           reset and continue.
```

26. The number of coefficients was too large in a covariance
    covr...process covariance data (25): Cov:Too many coeff.

```
 ---message from matshd--- 136 coefficients > 2
                           reset and continue
```

27. Coefficient mismatch of some sort
covr...process covariance data (26): COVR/matshd (2)

```
 ---message from matshd---processing of mat/mt 7434/ 17 vs. mat1/mt1 7434/852
                          largest coefficient= -6.90715E+02 at index 573 603
```

28. The number of coefficients is too big.
covr...process covariance data (27): COVR/matshd (3)

```
 ---message from matshd---   1 coefficients > 1
                          reset and continue.
```

29. The number of coefficients was too large in a covariance
covr...process covariance data (28): Cov:Too many coeff.

```
 ---message from matshd--- 241 coefficients > 2
                          reset and continue
```

30. Coefficient mismatch of some sort
covr...process covariance data (29): COVR/matshd (2)

```
 ---message from matshd---processing of mat/mt 7434/ 17 vs. mat1/mt1 7434/853
                          largest coefficient= -1.26867E+02 at index 573 454
```

31. The number of coefficients is too big.
covr...process covariance data (30): COVR/matshd (3)

```
 ---message from matshd---  14 coefficients > 1
                          reset and continue.
```

32. The number of coefficients was too large in a covariance
covr...process covariance data (31): Cov:Too many coeff.

```
 ---message from matshd--- 512 coefficients > 2
                          reset and continue
```

33. Coefficient mismatch of some sort
covr...process covariance data (32): COVR/matshd (2)

```
 ---message from matshd---processing of mat/mt 7434/ 17 vs. mat1/mt1 7434/854
                          largest coefficient=  4.09558E+02 at index 573 432
```

34. The number of coefficients is too big.
covr...process covariance data (33): COVR/matshd (3)

```
 ---message from matshd---   4 coefficients > 1
                          reset and continue.
```

35. The number of coefficients was too large in a covariance
covr...process covariance data (34): Cov:Too many coeff.

```
 ---message from matshd--- 426 coefficients > 2
                          reset and continue
```

36. Coefficient mismatch of some sort
covr...process covariance data (35): COVR/matshd (2)

```
 ---message from matshd---processing of mat/mt 7434/ 17 vs. mat1/mt1 7434/855
                          largest coefficient= -1.61307E+02 at index 573 518
```

37. The number of coefficients is too big.
covr...process covariance data (36): COVR/matshd (3)

```
 ---message from matshd---  17 coefficients > 1
                          reset and continue.
```

38. The number of coefficients was too large in a covariance
covr...process covariance data (37): Cov:Too many coeff.

```
 ---message from matshd--- 207 coefficients > 2
                          reset and continue
```

39. Coefficient mismatch of some sort
covr...process covariance data (38): COVR/matshd (2)

```
 ---message from matshd---processing of mat/mt 7434/ 17 vs. mat1/mt1 7434/856
                          largest coefficient= -4.28888E+02 at index 573 478
```

40. The number of coefficients is too big.
covr...process covariance data (39): COVR/matshd (3)

```
 ---message from matshd---  19 coefficients > 1
                          reset and continue.
```

41. The number of coefficients was too large in a covariance
covr...process covariance data (40): Cov:Too many coeff.

```
 ---message from matshd--- 256 coefficients > 2
                          reset and continue
```

42. Coefficient mismatch of some sort
covr...process covariance data (41): COVR/matshd (2)

```
 ---message from matshd---processing of mat/mt 7434/851 vs. mat1/mt1 7434/851
                          largest coefficient=  1.27277E+00 at index 493 502
```

43. The number of coefficients is too big.
covr...process covariance data (42): COVR/matshd (3)

```
 ---message from matshd---  28 coefficients > 1
                          reset and continue.
```

44. Coefficient mismatch of some sort
covr...process covariance data (43): COVR/matshd (2)

```
 ---message from matshd---processing of mat/mt 7434/855 vs. mat1/mt1 7434/855
                          largest coefficient=  1.41546E+00 at index 470 476
```

45. The number of coefficients is too big.
covr...process covariance data (44): COVR/matshd (3)

```
 ---message from matshd---  20 coefficients > 1
                          reset and continue.
```

46. Coefficient mismatch of some sort
covr...process covariance data (45): COVR/matshd (2)

```
 ---message from matshd---processing of mat/mt 7434/856 vs. mat1/mt1 7434/856
                          largest coefficient=  1.71262E+03 at index 223 233
```

47. The number of coefficients was too large in a covariance
covr...process covariance data (46): Cov:Too many coeff.

```
 ---message from matshd--- 260 coefficients > 1
                          reset and continue.
```

48. The number of coefficients is too big.
covr...process covariance data (47): COVR/matshd (3)

```
 ---message from matshd---  54 coefficients > 2
                          reset and continue
```

- `njoy2012` Errors:

1. An angular distribution is negative
acer...monte carlo neutron and photon data (0): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             1 for mt=  2 e= 4.800E+07
```

2. An angular distribution is negative
acer...monte carlo neutron and photon data (1): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             4 for mt=  2 e= 5.500E+07
```

3. An angular distribution is negative
acer...monte carlo neutron and photon data (2): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             5 for mt=  2 e= 6.000E+07
```

4. An angular distribution is negative
acer...monte carlo neutron and photon data (3): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             9 for mt=  2 e= 7.000E+07
```

5. An angular distribution is negative
acer...monte carlo neutron and photon data (4): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            81 for mt= 51 e= 1.150E+08
```

6. An angular distribution is negative
acer...monte carlo neutron and photon data (5): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            59 for mt= 51 e= 1.300E+08
```

7. An angular distribution is negative
acer...monte carlo neutron and photon data (6): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                           125 for mt= 51 e= 1.500E+08
```

8. An angular distribution is negative
acer...monte carlo neutron and photon data (7): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             1 for mt= 52 e= 9.000E+07
```

9. An angular distribution is negative
acer...monte carlo neutron and photon data (8): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             2 for mt= 52 e= 1.000E+08
```

10. An angular distribution is negative
acer...monte carlo neutron and photon data (9): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             1 for mt= 52 e= 1.150E+08
```

11. An angular distribution is negative
acer...monte carlo neutron and photon data (10): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                           112 for mt= 52 e= 1.300E+08
```

12. An angular distribution is negative
acer...monte carlo neutron and photon data (11): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            75 for mt= 52 e= 1.500E+08
```

13. An angular distribution is negative
acer...monte carlo neutron and photon data (12): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             4 for mt= 53 e= 1.500E+08
```

14. An angular distribution is negative
acer...monte carlo neutron and photon data (13): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             2 for mt= 54 e= 1.500E+08
```

15. An angular distribution is negative
acer...monte carlo neutron and photon data (14): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             1 for mt= 16 e= 7.191E+01
```

16. An angular distribution is negative
acer...monte carlo neutron and photon data (15): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            2 for mt= 16 e= 1.098E+02
```

17. An angular distribution is negative
acer...monte carlo neutron and photon data (16): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            1 for mt= 16 e= 1.125E+02
```

18. An angular distribution is negative
acer...monte carlo neutron and photon data (17): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            1 for mt= 16 e= 1.152E+02
```

19. An angular distribution is negative
acer...monte carlo neutron and photon data (18): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            1 for mt= 16 e= 1.213E+02
```

20. An angular distribution is negative
acer...monte carlo neutron and photon data (19): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            1 for mt= 16 e= 1.291E+02
```

21. An angular distribution is negative
acer...monte carlo neutron and photon data (20): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                           27 for mt= 16 e= 1.307E+02
```

22. An angular distribution is negative
acer...monte carlo neutron and photon data (21): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                           19 for mt= 16 e= 1.322E+02
```

23. An angular distribution is negative
acer...monte carlo neutron and photon data (22): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                           73 for mt= 16 e= 1.338E+02
```

24. An angular distribution is negative
acer...monte carlo neutron and photon data (23): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                           80 for mt= 16 e= 1.353E+02
```

25. An angular distribution is negative
acer...monte carlo neutron and photon data (24): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            2 for mt= 16 e= 1.400E+02
```

26. An angular distribution is negative
acer...monte carlo neutron and photon data (25): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             1 for mt= 17 e= 9.646E+01
```

27. An angular distribution is negative
acer...monte carlo neutron and photon data (26): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             3 for mt= 17 e= 1.098E+02
```

28. An angular distribution is negative
acer...monte carlo neutron and photon data (27): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             1 for mt= 17 e= 1.135E+02
```

29. An angular distribution is negative
acer...monte carlo neutron and photon data (28): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             2 for mt= 17 e= 1.244E+02
```

30. An angular distribution is negative
acer...monte carlo neutron and photon data (29): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            81 for mt= 17 e= 1.322E+02
```

31. An angular distribution is negative
acer...monte carlo neutron and photon data (30): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            45 for mt= 28 e= 1.307E+02
```

32. An angular distribution is negative
acer...monte carlo neutron and photon data (31): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            57 for mt= 28 e= 1.322E+02
```

33. An angular distribution is negative
acer...monte carlo neutron and photon data (32): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            41 for mt= 28 e= 1.338E+02
```

34. An angular distribution is negative
acer...monte carlo neutron and photon data (33): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            52 for mt= 28 e= 1.353E+02
```

35. An angular distribution is negative
acer...monte carlo neutron and photon data (34): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            1 for mt= 37 e= 8.681E+01
```

36. An angular distribution is negative
acer...monte carlo neutron and photon data (35): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            1 for mt= 37 e= 1.229E+02
```

37. An angular distribution is negative
acer...monte carlo neutron and photon data (36): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            1 for mt= 41 e= 1.229E+02
```

38. An angular distribution is negative
acer...monte carlo neutron and photon data (37): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            2 for mt= 41 e= 1.260E+02
```

39. An angular distribution is negative
acer...monte carlo neutron and photon data (38): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            3 for mt= 41 e= 1.291E+02
```

40. An angular distribution is negative
acer...monte carlo neutron and photon data (39): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            1 for mt= 91 e= 7.192E+01
```

41. An angular distribution is negative
acer...monte carlo neutron and photon data (40): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            1 for mt= 91 e= 8.682E+01
```

42. An angular distribution is negative
acer...monte carlo neutron and photon data (41): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            2 for mt= 91 e= 1.109E+02
```

43. An angular distribution is negative
acer...monte carlo neutron and photon data (42): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                           29 for mt= 91 e= 1.121E+02
```

44. An angular distribution is negative
acer...monte carlo neutron and photon data (43): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            4 for mt= 91 e= 1.247E+02
```

45. An angular distribution is negative
acer...monte carlo neutron and photon data (44): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            23 for mt= 91 e= 1.274E+02
```

46. An angular distribution is negative
acer...monte carlo neutron and photon data (45): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             1 for mt= 91 e= 1.229E+02
```

47. An angular distribution is negative
acer...monte carlo neutron and photon data (46): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            64 for mt= 91 e= 1.322E+02
```

48. An angular distribution is negative
acer...monte carlo neutron and photon data (47): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            12 for mt= 91 e= 1.338E+02
```

49. An angular distribution is negative
acer...monte carlo neutron and photon data (48): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            84 for mt= 91 e= 1.353E+02
```

50. An angular distribution is negative
acer...monte carlo neutron and photon data (49): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             2 for mt= 91 e= 1.384E+02
```

51. An angular distribution is negative
acer...monte carlo neutron and photon data (50): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             2 for mt= 28 e= 9.526E+01
```

52. An angular distribution is negative
acer...monte carlo neutron and photon data (51): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             3 for mt= 28 e= 1.025E+02
```

53. An angular distribution is negative
acer...monte carlo neutron and photon data (52): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            27 for mt= 28 e= 1.049E+02
```

54. An angular distribution is negative
acer...monte carlo neutron and photon data (53): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            55 for mt= 28 e= 1.061E+02
```

55. An angular distribution is negative
acer...monte carlo neutron and photon data (54): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             1 for mt= 28 e= 1.098E+02
```

56. An angular distribution is negative
acer...monte carlo neutron and photon data (55): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             2 for mt= 28 e= 1.112E+02
```

57. An angular distribution is negative
acer...monte carlo neutron and photon data (56): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             3 for mt= 28 e= 1.139E+02
```

58. An angular distribution is negative
acer...monte carlo neutron and photon data (57): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            42 for mt= 28 e= 1.152E+02
```

59. An angular distribution is negative
acer...monte carlo neutron and photon data (58): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            29 for mt= 28 e= 1.166E+02
```

60. An angular distribution is negative
acer...monte carlo neutron and photon data (59): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            30 for mt= 28 e= 1.179E+02
```

61. An angular distribution is negative
acer...monte carlo neutron and photon data (60): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            19 for mt= 28 e= 1.193E+02
```

62. An angular distribution is negative
acer...monte carlo neutron and photon data (61): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             1 for mt= 28 e= 1.213E+02
```

63. An angular distribution is negative
acer...monte carlo neutron and photon data (62): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             2 for mt= 28 e= 1.244E+02
```

64. An angular distribution is negative
acer...monte carlo neutron and photon data (63): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            15 for mt= 28 e= 1.260E+02
```

65. An angular distribution is negative
acer...monte carlo neutron and photon data (64): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            38 for mt= 28 e= 1.275E+02
```

66. An angular distribution is negative
acer...monte carlo neutron and photon data (65): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            42 for mt= 28 e= 1.291E+02
```

67. An angular distribution is negative
acer...monte carlo neutron and photon data (66): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            16 for mt= 28 e= 1.307E+02
```

68. An angular distribution is negative
acer...monte carlo neutron and photon data (67): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            47 for mt= 28 e= 1.322E+02
```

69. An angular distribution is negative
acer...monte carlo neutron and photon data (68): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            67 for mt= 28 e= 1.338E+02
```

70. An angular distribution is negative
acer...monte carlo neutron and photon data (69): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            28 for mt= 28 e= 1.353E+02
```

71. An angular distribution is negative
acer...monte carlo neutron and photon data (70): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            19 for mt= 28 e= 1.369E+02
```

72. An angular distribution is negative
acer...monte carlo neutron and photon data (71): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            43 for mt= 28 e= 1.384E+02
```

73. An angular distribution is negative
acer...monte carlo neutron and photon data (72): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                           47 for mt= 28 e= 1.400E+02
```

74. An angular distribution is negative
acer...monte carlo neutron and photon data (73): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            1 for mt= 41 e= 9.164E+01
```

75. An angular distribution is negative
acer...monte carlo neutron and photon data (74): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            2 for mt= 41 e= 1.112E+02
```

76. An angular distribution is negative
acer...monte carlo neutron and photon data (75): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            3 for mt= 41 e= 1.125E+02
```

77. An angular distribution is negative
acer...monte carlo neutron and photon data (76): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            1 for mt= 41 e= 1.182E+02
```

78. An angular distribution is negative
acer...monte carlo neutron and photon data (77): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            3 for mt= 41 e= 1.229E+02
```

79. An angular distribution is negative
acer...monte carlo neutron and photon data (78): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            3 for mt= 41 e= 1.244E+02
```

80. An angular distribution is negative
acer...monte carlo neutron and photon data (79): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                           29 for mt= 41 e= 1.260E+02
```

81. An angular distribution is negative
acer...monte carlo neutron and photon data (80): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                           40 for mt= 41 e= 1.275E+02
```

82. An angular distribution is negative
acer...monte carlo neutron and photon data (81): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            2 for mt= 41 e= 1.291E+02
```

83. An angular distribution is negative
acer...monte carlo neutron and photon data (82): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            50 for mt= 41 e= 1.307E+02
```

84. An angular distribution is negative
acer...monte carlo neutron and photon data (83): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             1 for mt=649 e= 8.509E+01
```

85. An angular distribution is negative
acer...monte carlo neutron and photon data (84): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             1 for mt=649 e= 9.081E+01
```

86. An angular distribution is negative
acer...monte carlo neutron and photon data (85): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             3 for mt=649 e= 9.187E+01
```

87. An angular distribution is negative
acer...monte carlo neutron and photon data (86): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            48 for mt=649 e= 9.609E+01
```

88. An angular distribution is negative
acer...monte carlo neutron and photon data (87): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            41 for mt=649 e= 9.715E+01
```

89. An angular distribution is negative
acer...monte carlo neutron and photon data (88): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             1 for mt=649 e= 9.164E+01
```

90. An angular distribution is negative
acer...monte carlo neutron and photon data (89): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             3 for mt=649 e= 1.049E+02
```

91. An angular distribution is negative
acer...monte carlo neutron and photon data (90): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            31 for mt=649 e= 1.061E+02
```

92. An angular distribution is negative
acer...monte carlo neutron and photon data (91): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            42 for mt=649 e= 1.073E+02
```

93. An angular distribution is negative
acer...monte carlo neutron and photon data (92): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            73 for mt=649 e= 1.085E+02
```

94. An angular distribution is negative
acer...monte carlo neutron and photon data (93): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            26 for mt=649 e= 1.097E+02
```

95. An angular distribution is negative
acer...monte carlo neutron and photon data (94): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            48 for mt=649 e= 1.109E+02
```

96. An angular distribution is negative
acer...monte carlo neutron and photon data (95): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            56 for mt=649 e= 1.121E+02
```

97. An angular distribution is negative
acer...monte carlo neutron and photon data (96): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             3 for mt=649 e= 1.125E+02
```

98. An angular distribution is negative
acer...monte carlo neutron and photon data (97): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            31 for mt=649 e= 1.152E+02
```

99. An angular distribution is negative
acer...monte carlo neutron and photon data (98): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            54 for mt=649 e= 1.166E+02
```

100. An angular distribution is negative
acer...monte carlo neutron and photon data (99): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            49 for mt=649 e= 1.179E+02
```

101. An angular distribution is negative
acer...monte carlo neutron and photon data (100): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            43 for mt=649 e= 1.193E+02
```

102. An angular distribution is negative
acer...monte carlo neutron and photon data (101): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            24 for mt=649 e= 1.207E+02
```

103. An angular distribution is negative
acer...monte carlo neutron and photon data (102): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            58 for mt=649 e= 1.220E+02
```

104. An angular distribution is negative
acer...monte carlo neutron and photon data (103): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            31 for mt=649 e= 1.234E+02
```

105. An angular distribution is negative
acer...monte carlo neutron and photon data (104): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            37 for mt=649 e= 1.247E+02
```

106. An angular distribution is negative
acer...monte carlo neutron and photon data (105): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            20 for mt=649 e= 1.261E+02
```

107. An angular distribution is negative
acer...monte carlo neutron and photon data (106): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                             1 for mt=649 e= 1.182E+02
```

108. An angular distribution is negative
acer...monte carlo neutron and photon data (107): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            38 for mt=649 e= 1.260E+02
```

109. An angular distribution is negative
acer...monte carlo neutron and photon data (108): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            27 for mt=649 e= 1.276E+02
```

110. An angular distribution is negative
acer...monte carlo neutron and photon data (109): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            24 for mt=649 e= 1.291E+02
```

111. An angular distribution is negative
acer...monte carlo neutron and photon data (110): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            17 for mt=649 e= 1.307E+02
```

112. An angular distribution is negative
acer...monte carlo neutron and photon data (111): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            58 for mt=649 e= 1.322E+02
```

113. An angular distribution is negative
acer...monte carlo neutron and photon data (112): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            76 for mt=649 e= 1.338E+02
```

114. An angular distribution is negative
acer...monte carlo neutron and photon data (113): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            63 for mt=649 e= 1.353E+02
```

115. An angular distribution is negative
acer...monte carlo neutron and photon data (114): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            64 for mt=649 e= 1.369E+02
```

116. An angular distribution is negative
acer...monte carlo neutron and photon data (115): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            55 for mt=649 e= 1.384E+02
```

117. An angular distribution is negative
acer...monte carlo neutron and photon data (116): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            80 for mt=649 e= 1.400E+02
```

118. An angular distribution is negative
acer...monte carlo neutron and photon data (117): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            43 for mt=649 e= 1.416E+02
```

119. An angular distribution is negative
acer...monte carlo neutron and photon data (118): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            96 for mt=649 e= 1.431E+02
```

120. An angular distribution is negative
acer...monte carlo neutron and photon data (119): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            57 for mt=649 e= 1.447E+02
```

121. An angular distribution is negative
acer...monte carlo neutron and photon data (120): Neg. P(Ejμ) (b)

```
 ---message from ptleg2---negative probs found
                            60 for mt=649 e= 1.462E+02
```

- `acelst` Warnings:

1. The incident energy grid is not monotonic for this angular distribution
0: Bad Ang. Dist.

```
 ACELST WARNING - Processing Ang.Dist.MT         2
                  E-grid non-monotonic   7.000000000E+01 7.000000000E+01
```

- `endf2htm` Warnings:

1. Build of a section of the HTML page failed because the format hasn't been implemented in ENDF2HTM.
MF32MT151: Unimplemented

```
At line 2659 of file endf.f
Fortran runtime error: Bad value during integer read
```

- `xsectplotter` Warnings:

1. Generic warning message
(Error # 2): Warning

```
WARNING: Encountered MT=18 MF=8/10 data (not yet accepted in ENDF format). See option --ignoreMF10Fission
```

2. A covariance format not yet supported by fudge (LRF=7 covariances)
(Error # 3): Cov. unimp. (e)

```
WARNING: skipping LRF=7 resonance covariances!
```